

Amendments to the Claims

The following list of claims replaces all prior lists of claims in the application:

Listing of the Claims:

1. (Currently Amended) A fire resistant polymer composition based on ~~silicone polymer~~ a crosslinkable organopolysiloxane and containing inorganic filler for forming a self supporting ceramic under fire conditions, the composition comprising:

the crosslinkable organopolysiloxane ~~silicone polymer~~ present in an amount of from 56.5% to 76.75% by weight of the total composition;

mica in an amount of from 5% to 30% by weight based on the total weight of the composition; and

a glass additive in a form selected from a group consisting of glass frits, glass fibre, and mixtures thereof in an amount of from 0.3% to 8% by weight based on the total weight of the composition,

wherein after the composition is heated to 1000°C and then held at 1000°C for 30 minutes in air the composition exhibits less than about 10% volume shrinkage.

2. (Cancelled)

3. (Original) The composition according to claim 1, wherein the glass additive has a softening point below 1050°C.

4. (Original) The composition according to claim 1, wherein the glass additive has a softening point below 800°C.

5. (Original) The composition according to claim 1, wherein the glass additive has a softening point between 300 and 800°C.

6. (Original) The composition according to claim 1, wherein the glass additive comprises a blend of glass additives having low and high softening points.

7. (Original) The composition according to claim 1, wherein the glass additive has an alkali metal oxide content of less than 50% by weight of the glass additive.
8. (Original) The composition according to claim 1, wherein the glass additive has an alkali metal oxide content of less than 30% by weight of the glass additive.
9. (Original) The composition of claim 1, further comprising fire retardant materials which form oxides when exposed to ceramic formation temperatures selected from the group consisting of zinc borate, magnesium hydroxide and alumina trihydrate.
10. (Original) The composition according to claim 8, further comprising inorganic fibers which do not melt at 1000°C.
11. (Original) A composition according to claim 1, consisting essentially of the silicone polymer, mica, glass additive and a crosslinking agent.
12. (Original) The composition of claim 1, wherein the mica is a phlogopite mica.
13. (Original) The composition of claim 1, wherein the mica is a muscovite mica.
14. (Original) The composition of claim 1, wherein the mica has a mean particle size range of from 15 μm to 250 μm .
15. (Original) The composition of claim 14, wherein the mica has a mean average particle size range of from 50 μm to 200 μm .
16. (Original) The composition of claim 1, further comprising a silane coupling agent.
17. (Previously Presented) The composition of claim 16, wherein the silane coupling agent is selected from the group consisting of vinyltrimethoxysilane, aryl silane, epoxysilane, acrylsilane, polymeric silane and mercaptosilanes
18. (Previously Presented) The composition of claim 16, wherein the silane coupling agent is present in an amount of from 0.05% to 2%.

19. (Currently Amended) A fire resistant polymer composition based on ~~silicone polymer~~ a crosslinkable organopolysiloxane and containing inorganic filler for forming a self support ceramic under fire conditions, comprising:

a polymer component consisting essentially of the ~~silicone polymer~~ crosslinkable organopolysiloxane wherein the ~~silicone polymer~~ crosslinkable organopolysiloxane is present in an amount of from 56.5% to 76.75% by weight of the total composition;

mica in an amount of from 5% to 30% by weight based on the total weight of the composition; and

a glass additive in a form selected from a group consisting of glass frits, glass fibre and mixtures thereof in an amount of from 0.3% to 8% by weight based on the total weight of the composition,

wherein after the composition is heated to 1000°C and then held at 1000°C for 30 minutes in air the composition exhibits less than about 10% volume shrinkage.

20. (Cancelled)

21. (Original) The composition according to claim 19, wherein the glass additive has a softening point below 1050°C.

22. (Original) The composition according to claim 19, wherein the glass additive has a softening point below 800°C.

23. (Original) The composition according to claim 19, wherein the glass additive has a softening point between 300 and 800°C.

24. (Original) The composition according to claim 19, wherein the glass additive comprises a blend of glass additives having low and high softening points.

25. (Original) The composition according to claim 19, wherein the glass additive has an alkali metal oxide content of less than 50% by weight of the glass additive.

26. (Original) The composition according to claim 19 wherein the glass additive has an alkali metal oxide content of less than 30% by weight of the glass additive.

27. (Previously Presented) The composition according to claim 19, further comprising at least one fire retardant material selected from the group consisting of zinc borate, magnesium hydroxide or alumina trihydrate.

28. (Previously Presented) The fire resistant composition of claim 1 or 19, wherein the amount of glass additive is sufficient to ensure the formation of a self supporting ceramic material at temperatures above the decomposition temperature of the silicone polymer and below the fire rating temperature of the composition.

29. (Original) The composition of claim 28, wherein the fusion temperature of the composition is above the fire rating temperature.

30. (Original) The composition of claim 28, wherein the composition undergoes a volume shrinkage of less than 10% when heated to the fire rating temperature.

31. (Original) The composition of claim 28 wherein the composition undergoes a volume shrinkage of less than 5% when heated to the fire rating temperature.

32. (Previously Presented) The fire resistant composition as claimed in claim 1 or 19 wherein said composition is applied in a passive fire protection use selected from the group consisting of a firewall lining, a fire partition, a screen, a ceiling or lining, structural fire protection, a fire door insert, a window or door seal, or a coating in an electrical switchboard cabinet.

33. (Previously Presented) The fire resistant composition as claimed in claim 1 or 19 wherein said composition forms a coating of an electrical conductor.

34. (Withdrawn) An electrical cable comprising a composition as claimed in claim 1 or 19.

35. (Withdrawn – Currently Amended) An electrical cable comprising a conductor and a polymeric composition extruded over the conductor, the polymeric composition comprising:

a ~~silicone polymer~~ crosslinkable organopolysiloxane present in an amount of from 56.5% to 76.75% by weight of the total composition;

mica in an amount of from 15% to 30% by weight based on the total weight of the composition; and

a glass additive in an amount of from 0.3% to 8% by weight based on the total weight of the composition,

wherein after the composition is heated to 1000°C and then held at 1000°C for 30 minutes in air the composition exhibits less than about 10% volume shrinkage.

36. (Withdrawn) The electrical cable of claim 35 wherein the mica has a mean particle size in the range of 50 μm to 200 μm .

37. (Withdrawn) An electrical cable of claim 35, wherein the mica is muscovite mica.

38. (Withdrawn) An electrical cable of claim 35 wherein the glass additive is present as glass frits.

39. (Cancelled)

40. (Cancelled)

41. (Previously Presented) The composition of claim 1, wherein the composition is extrudable.

42. (Previously Presented) The composition of claim 19, wherein the composition is extrudable.

43. (Cancelled)

44. (Previously Presented) The composition of claim 1, wherein a 1.7 mm thick sample of the composition has a penetration load greater than 40 N after having been heated to 600°C at a rate of 10°C per minute and then being held at 600°C for 30 minutes in air.

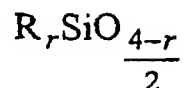
45. (Previously Presented) The composition of claim 1, wherein a 3 mm thick sample of the composition has a flexural strength greater than 3.2 MPa after having been heated to 1000°C and then being held at 1000°C for 30 minutes in air.

46. (Previously Presented) The composition of claim 1, wherein the glass additive has a mean particle size less than 12 μm .

47. (Previously Presented) The composition of claim 1, wherein the composition has an electrical volume resistivity of greater than 6.7×10^5 ohm-cm.

48. (Previously Presented) The composition of claim 1, wherein the composition further comprises a fire retardant and a silane coupling agent, and a 3 mm thick sample of the composition has a flexural strength greater than 1.47 MPa and a flexural modulus greater than 7.28 MPa after firing at 1050°C for 30 minutes.

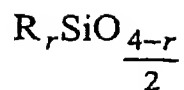
49. (New) The composition of claim 1, wherein the crosslinkable organopolysiloxane is composed of units of formula:



wherein

R may be identical or different and are unsubstituted or substituted hydrocarbon radicals,
r is 0, 1, 2, or 3 and has an average numerical value of from 1.9 to 2.1.

50. (New) The composition of claim 19, wherein the crosslinkable organopolysiloxane is composed of units of formula:



wherein

R may be identical or different and are unsubstituted or substituted hydrocarbon radicals, r is 0, 1, 2, or 3 and has an average numerical value of from 1.9 to 2.1.

51. (New) A fire resistant polymer composition based on a crosslinkable organopolysiloxane and containing inorganic filler for forming a self supporting ceramic under fire conditions, the composition comprising:

the crosslinkable organopolysiloxane present in an amount of from 56.5% to 76.75% by weight of the total composition;

mica in an amount of from 5% to 30% by weight based on the total weight of the composition; and

a glass additive in a form selected from a group consisting of glass frits, glass fibre, and mixtures thereof in an amount of from 0.3% to 8% by weight based on the total weight of the composition,

wherein after the composition is heated to 1000°C and then held at 1000°C for 30 minutes in air the composition exhibits less than about 10% volume shrinkage,

wherein a 1.7 mm thick sample of the composition has a penetration load greater than 40 N after having been heated to 600°C at a rate of 10°C per minute and then being held at 600°C for 30 minutes in air, and

wherein a 3 mm thick sample of the composition has a flexural strength greater than 3.2 MPa after having been heated to 1000°C and then being held at 1000°C for 30 minutes in air.